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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/786,731

02/25/2004

Jack Nilsson

200106.4

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04/29/2005

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EXAMINER

CABUCOS, MARIE G

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 04/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/786,731

Applicant(s)

NILSSON, JACK

Examiner

Marie Antoinette Cabucos

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 10, 11, 13-18, 20-24 and 26 is/are rejected.
- 7) ☒ Claim(s) 7, 9, 12, 19, 25, 27 and 28 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/21/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 8, 10, 11, 13, 18, 20, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moilanen (5,561,439) in view of Shiina (5,264,858).

Claims 1 and 13, Shiina teaches of an antenna comprising at least two radiative antenna elements (3) each having a first end and a second end, and wherein said second ends of said radiative antenna elements are electrically connected at an apex point (5) and are each disposed outwardly away from said apex point at an acute angle relative to and on a first side of an imaginary plane intersecting said apex point. Shiina does not teach an electrically conductive, non-planar ground reference but is disclosed by Moilanen as referenced by (2) in figure 3 of the prior art. It would have been obvious by one having ordinary skill in the art, at the time of the invention, to manufacture the antenna taught in Moilanen with the non-planar ground and mounting mechanism taught in Moilanen for easy installation.

Claims 8 and 18, ground disclosed in Moilanen is coned shaped having a side length that is about $\frac{1}{4}$ wavelength (col1, lines 48-50).

Claims 11 and 26, Moilanen further discloses a mounting mechanism (col. 1, lines 48-50).

2. Claims 2, 4, 6, 14, 16, 21, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moilanen in view of Shiina as applied to claims 1 and 13 above, and further in view of Pla (6,300,912).

Claims 2 and 14, Moilanen and Shiina does not disclose a dielectric material serving to mechanically connect the radiative antenna elements to the ground while electrically insulating the radiative antenna elements from the ground. Figure 1 of Pla teaches of a dielectric block (20). It would have been obvious by one having ordinary skill in the art, at the time of the invention, to use the dielectric block disclosed in Pla with the antenna disclosed in Moilanen and Shiina so as to support and insulate the antenna elements.

Claims 3, 4, 15, and 16, while Moilanen discloses a connection means, Moilanen and Shiina do not disclose connection to a transmission line for interfacing radiative antenna elements to a radio frequency transmitter and/or receiver. Pla discloses connection to an electronic device (col. 4, line 30-33). It would have been obvious by one having ordinary skill in the art, at the time of the invention, for connection means disclosed in moilanene to connect to an electronic device as disclosed by Pla for convenience and simple installation.

Claims 6, 21, 23 and 24, while Moilanen and Shiina disclose radiative antenna elements that are substantially linear, Moilanen and Shiina do not disclose of elements having a predetermined physical length. Pla discloses of radiative antenna elements that are substantially linear and have a predetermined physical length (col. 2, lines 53-56). It would have been obvious by one having ordinary skill in the art, at the time of the invention, for antenna disclosed in Moilanen and Shiina for elements to have a predetermined physical length as disclosed by Pla for easy tuning.

Claims 10 and 20, Moilanen and Shiina do not disclose an outer conductor of a coaxial cable. Pla discloses a coaxial cable having an outer conductor (col. 1, line 35). It would have been obvious by one having ordinary skill in the art, at the time of the invention, to use the coaxial cable disclosed in Pla with the antenna disclosed in Moilanen and Shiina for a compact and simple to install antenna.

3. Claims 5, 17 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moilanen in view of Shiina as applied to claims 1 and 13 above, and further in view of Press (1,554,231).

Moilanen and Shiina do not disclose of radiative elements being wound coils. Figures 6 and 7 of Press disclose coil antennas. It would have been obvious by one having ordinary skill in the art, at the time of the invention, to construct the antenna disclosed in Moilanen and Shiina with the wound coils of Press for a more compact antenna.

Allowable Subject Matter

Claims 7, 9, 12, 19, 25, 27 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 7, 12, 25, and 27, limitation of the positioning of the radiative elements as recited.

Claims 9 and 19. limitation of the ground being cylindrical in shape.

Claim 28, limitation of connecting a motor to antenna to allow rotation of antenna about a defined axis of the antenna.

Conclusion

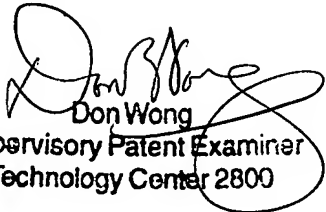
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marie Antoinette Cabucos whose telephone number is 571-272-8582. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2821

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marie Antoinette Cabucos
4/26/2005


Don Wong
Supervisory Patent Examiner
Technology Center 2800